

REMARKS

Prior to entry of this amendment, claims 1-20 are currently pending in the subject application. Claims 1 and 11 have been amended to incorporate limitations from original dependent claims 3 and 13, respectively. Claims 3 and 13 have been cancelled. Claims 6 and 16 have been amended to more clearly recite the present invention and to be presented in independent form. Claims 21 and 22 have been added. Claims 1, 6, 11 and 16 are independent.

Applicants appreciate the Examiner's acknowledgement of applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants request, in the next Office action, that the Examiner indicate the acceptability of the drawings filed on December 31, 2003.

Applicants further appreciate the Examiner's consideration of applicants Information Disclosure Statement filed December 31, 2003.

Claims 1-2, 4-12 and 14-22 are presented to the Examiner for further or initial prosecution on the merits.

A. Introduction

In the outstanding Office action, the Examiner rejected claims 1-2, 4, 11-12 and 14 under 35 U.S.C. § 102(b) as being anticipated by WO 00/00993 to Chen et al. (hereinafter "the '993 Chen et al. reference"), rejected claims 3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over the '993 Chen et al. reference, rejected claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the '993 Chen et al. reference in view of admitted prior art, and rejected claims 6-10 and 16-20 under 35 U.S.C. § 103(a) as being unpatentable over the '993 Chen et al. reference in view of U.S. Patent No. 5,346,578 to Benzing et al. (hereinafter "the Benzing et al. reference"), U.S. Patent Application Publication No. 2003/0106645 to Ni et al. (hereinafter "the

Ni et al. reference”) or U.S. Patent Application Publication No. 2002/0140359 to Chen et al. (hereinafter “the ’359 Chen et al. reference”).

B. Asserted Anticipation Rejection of Claims 1-2, 4, 11-12 and 14

In the outstanding Office action, the Examiner rejected claims 1-2, 4, 11–12 and 14 under 35 U.S.C. § 102(b) as being anticipated by the ’993 Chen et al. reference. Claims 1 and 11 have been amended to include the limitations of claims 3 and 13, thereby obviating this rejection. Therefore, it is respectfully requested that this rejection be withdrawn.

C. Asserted Obviousness Rejection of Claims 3 and 13

In the outstanding Office action, the Examiner rejected claims 3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over the ’993 Chen et al. reference. This rejection is respectfully traversed for at least the reasons set forth below.

In rejecting claims 3 and 13, the Examiner notes that a *prima facie* case of obviousness exists when the only difference between the prior art and the claims is a relative dimension of the apparatus. It is respectfully submitted that the claimed relative dimension is not a mere design choice and would perform differently than the antenna in the ’993 Chen et al. reference.

In particular, as noted in paragraphs [0034] and [0035] of the original specification, and as now recited in claims 1 and 11, the outermost turn is connected in parallel with the inner turns and a sum of lengths of the plurality of inner turns is longer than a length of the outermost turn. This structure results in a larger current flowing through the outermost turn than the inner turns. In contrast, in the ’993 Chen et al. reference, tuning capacitors are used to adjust the current in the outer coil to be larger than that in the inner coil. Further, the ’993 Chen et al. reference teaches that while the inner coil typically has a shorter electrical length than the outer coil, a

greater degree of current adjustment may be realized when the electrical length of the coils are substantially similar.

Therefore, it is respectfully submitted that the '993 Chen et al. reference fails to suggest, much less disclose, the present invention as now recited in claims 1 and 11. Therefore, it is respectfully requested that this rejection be withdrawn.

D. Asserted Obviousness Rejection of Claims 5 and 15

In the outstanding Office action, the Examiner rejected claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the '993 Chen et al. reference in view of admitted prior art. First, it is noted that since the coils in the '993 Chen et al. reference are connected through a tuning capacitor, it is respectfully submitted that it would not be obvious to connect these coils in a single line, as this would appear to destroy the function of the tuning capacitors. Second, claims 5 and 15 depend from claims 1 and 11, respectively, and are believed to be allowable for at least the reasons set forth above. Therefore, it is respectfully requested that this rejection be withdrawn.

E. Asserted Obviousness Rejection of Claim 6-10 and 16-20

In the outstanding Office action, the Examiner rejected claims 6-10 and 16-20 under 35 U.S.C. § 103(a) as being unpatentable over the '993 Chen et al. reference in view of the Benzing et al. reference, the Ni et al. reference or the '359 Chen et al. reference. Claims 6 and 16 have been amended to more clearly recite the present invention and to be presented in independent form. It is respectfully submitted that these amended claims clearly define the present invention over the applied art for at least the reasons set forth below.

Claims 6 and 16 now recite, in part, that the coil includes "a conductive metal tube having a cooling path, and a conductive metal strip that is electrically and thermally connected to

the conductive metal tube and is coextensive with the conductive metal tube.” This is clearly disclosed, for example, in FIG. 4 and paragraph [0040] of the original specification.

While the Benzing et al. reference may illustrate a cooling path, it is respectfully submitted that this cooling path is not integral with the coil, as now more clearly recited in claims 6 and 16. Further, while either the Ni et al. reference or the '359 Chen et al. reference may disclose a metal strip used as lead for the antenna, neither disclose nor suggest such a metal strip in relation to the cooling path in the coil, as now more clearly recited in claims 6 and 16.

Therefore, it is respectfully submitted that none of the prior art references, either alone or in any combination thereof, disclose or suggest the present invention as recited in claims 6 and 16. The remaining rejected claims depend from respective ones of claims 6 and 16, and are similarly believed to be allowable. Therefore, it is respectfully requested that this rejection be withdrawn.

F. Claims 21-22

Claims 21 and 22, depending from claims 1 and 11, respectively, have been added to recite additional detail of the coil as now recited in independent claims 6 and 16, and are similarly believed to be allowable.

G. Conclusion

Since the cited prior art references neither anticipate nor render obvious the subject invention as presently claimed, applicants respectfully submit that claims 1-2, 4-12 and 14-22 are now in condition for allowance, and a notice to that effect is respectfully requested.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

LEE & MORSE, P.C.

Date: March 6, 2006


Eugene M. Lee, Reg. No. 32,039

LEE & MORSE, P.C.
1101 WILSON BOULEVARD, SUITE 2000
ARLINGTON, VA 22209
703.525.0978 TEL
703.525.4265 FAX

PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.